

**Maritimes & Northeast Pipeline, L.L.C.**  
**Waldo County**  
**Searsmont, Maine**  
**A-857-71-A-N**

**Departmental**  
**Findings of Fact and Order**  
**Air Emission License**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

Maritimes & Northeast Pipeline, L.L.C. (M&N) of Boston, Mass. has applied for an Air Emission License permitting the operation of emission sources associated with their new natural gas compressor station located in Searsmont, Maine.

**B. Emission Equipment**

M&N is licensed to operate the following equipment:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (scf/hr)</u></b>	<b><u>Fuel Type</u></b>	<b><u>Post Combustion Control Equipment</u></b>	<b><u>Stack #</u></b>
Turbine #1	138.22	132,000	Natural Gas	SoLoNOx II Combustor	1
Turbine #2	138.22	132,000	Natural Gas	SoLoNOx II Combustor	2
Generator #1	4.29	4,125	Natural Gas	None	3
Boiler #1	1.67	1,600	Natural Gas	None	4

**C. Application Classification**

A new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as given in Maine's Air Regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

<u>Pollutant</u>	<u>Max. Future License (TPY)</u>	<u>Sig. Level</u>
PM	8.7	100
PM <sub>10</sub>	8.7	100
SO <sub>2</sub>	4.3	100
NO <sub>x</sub>	74.3	100
CO	72.8	100
VOC	10.0	50

This source is determined to be a minor new source and has been processed as such.

## II. BEST PRACTICAL TREATMENT (BPT)

### A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

### B. Turbines #1 and #2

M&N proposes to construct and operate a natural gas compressor station in Searsmont, Maine. The compressor station will include two Solar Mars 100-T15000S turbine/compressor packages (Turbines #1 and #2). These units are each rated at a heat input of 138.22 MMBtu/hr firing natural gas only.

The gas fired turbines are subject to New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart GG-Standards of Performance for Stationary Gas Turbines, for which construction has commenced after October 3, 1977.

New Source Performance Standards do apply to this facility; however, the proposed BACT is more stringent; compliance with BACT will ensure compliance with the NSPS.

M&N has proposed BACT for the Searsmont compressor station to be the following:

NO <sub>x</sub>	SoLoNO <sub>x</sub> II Combustion Technology
CO	SoLoNO <sub>x</sub> II Combustion Technology
VOC	SoLoNO <sub>x</sub> II Combustion Technology
SO <sub>2</sub>	Natural Gas Only
PM/PM <sub>10</sub>	Natural Gas Only
Toxics	SoLoNO <sub>x</sub> II Combustion Technology

A summary of the BACT proposed for each pollutant is discussed below:

#### Nitrogen Oxides

Nitrogen Oxides (NO<sub>x</sub>) emitted from the combustion sources results from the oxidation of both fuel bound nitrogen and atmospheric nitrogen (thermal NO<sub>x</sub>). Natural gas has very low fuel bound nitrogen so reducing NO<sub>x</sub> emissions must focus on reducing the thermal NO<sub>x</sub>. M&N proposes the use of SoLoNO<sub>x</sub> Combustion Technology which combines premixing and lean fuel-air mixtures with a two stage combustion zone thereby eliminating high flame temperatures and reducing thermal NO<sub>x</sub> formation.

The latest improvements to the SoLoNO<sub>x</sub> Combustion Technology include the addition of augmented backside cooled (ABC) liners and an advanced thermal barrier coating (TBC). The ABC liners eliminate air injection into the combustor for wall cooling. The wall temperatures are controlled exclusively through convective cooling by high velocity air flow on the cold side of the liner. The TBC is a zirconia-based material that is plasma-sprayed onto the liner which reduces wall temperature. The ABC/TBC combination allows operation without air injection for cooling of the combustor liner, which eliminates quenching along the walls and thereby reduces CO emissions. The reduction of CO levels also allows the combustor to be operated at lower flame temperatures, which reduces NO<sub>x</sub> formation. Combustors built with the additional ABC/TBC technology are marketed as SoLoNO<sub>x</sub> II.

M&N evaluated several NO<sub>x</sub> control strategies for their technical and economic feasibility. The top two technologies for controlling NO<sub>x</sub> from these types of units are catalytic combustion and SoLoNO<sub>x</sub> II combustion. Currently, catalytic combustion is considered a leading edge technology for the reduction of NO<sub>x</sub> emissions from natural gas turbines, but has yet to become commercially available on the Mars line of turbines.

Therefore, the Department has concluded BACT for NO<sub>x</sub> emissions shall consist of operating the turbines with SoLoNO<sub>x</sub> II Combustion Technology designed to achieve NO<sub>x</sub> emissions from each turbine of 15 ppmvd @ 15% O<sub>2</sub> and 7.47 lb/hr.

#### Carbon Monoxide

Carbon Monoxide (CO) results from the incomplete combustion of gas in the turbine. The proposed turbine is guaranteed to achieve 25 ppmvd @ 15% O<sub>2</sub> at 0 °F between 100% and 50% loads. This represents a 50% reduction in CO emissions over the level determined to represent BACT for the existing compressor stations permitted in Richmond and Baileyville in 1998.

The proposed gas turbine uses a dry low NO<sub>x</sub> combustor system, integrates sophisticated burner controls with staged premixed combustion zones, and fuel feed systems to achieve the required low NO<sub>x</sub> emissions. Additional CO reductions are attributed to the ABC/TBC technology described above.

M&N is proposing SoLoNO<sub>x</sub> II combustor technology and associated good combustion practices and instrumentation and controls as BACT for CO. The proposed BACT CO emission limit is 7.58 lb/hr. The Department accepts this BACT proposal.

#### Volatile Organic Compounds

The majority of volatile organic compounds (VOCs) that are emitted from gas fired turbines come from unburned hydrocarbons. Control of VOCs is accomplished by providing adequate fuel residence time and high temperature in the combustion zone to ensure complete combustion. A review of the RACT/BACT/LAER Clearinghouse (RBLC) was performed to determine recent emission rates and control technologies that are considered BACT.

From the review of the RBLC, few comparable facilities reported any limit for VOCs. For each facility BACT was listed as combustion control.

Based on the information from the RBLC, M&N is proposing combustion control, via the SoLoNO<sub>x</sub> II combustor, as BACT for VOCs. M&N are proposing a VOC BACT emission limit of 0.5 lb/hr. The Department accepts this BACT proposal.

#### Particulate Matter

Units firing fuels with low ash content and high combustion efficiency exhibit low particulate matter emissions. The most stringent particulate control method demonstrated for gas turbines is the use of low ash fuel such as natural gas. A review of the RBLC determined that the BACT is combustion control.

M&N is proposing as BACT for PM/PM<sub>10</sub> the firing of only natural gas. The proposed PM/PM<sub>10</sub> limit is 0.91 lb/hr. The Department accepts this BACT proposal.

#### Sulfur Dioxide

Sulfur dioxide (SO<sub>2</sub>) is formed from the oxidation of sulfur in fuel. The most stringent method of control for SO<sub>2</sub> that has been demonstrated for gas fired turbines is firing pipeline quality natural gas. The EPA established NSPS for gas turbines which commenced construction, modification, or reconstruction after October 3, 1979. The NSPS limit for sulfur in fuel is 0.8% by weight.

#### Air Toxics

Formaldehyde is the only organic compound which is also an air toxic that is emitted in more than a negligible amount. Total annual emissions are less than 1 ton/year per unit, substantially below the 10 ton/year major source threshold. Good combustion practice, with a state of the art combustion system, insures complete combustion of organic constituents of the fuel stream. Therefore, good combustion practice represents BACT for the control of air toxics. The Department accepts this BACT proposal.

#### C. Fuel Monitoring

EPA Region 1 approved a requested alternative fuel monitoring schedule for M&N at their existing compressor stations. The following was included in the letter from Ira Leighton to David Felcman dated November 3, 1999

EPA has given approval to a monitoring scheme where natural gas monitoring will be conducted at the Baileyville station only in cases of southbound gas flow and at the Westbrook station in cases of northbound gas flow provided that there are no additional entry points for natural gas or other sulfur containing streams between these stations.

M&N shall conduct fuel monitoring at the Baileyville or Westbrook stations as appropriate using ASTM reference method D5504-94, or another EPA approved methodology, on the following schedule:

1. No monitoring of fuel nitrogen is required so long as the pipeline compressor station is supplied with solely pipeline-quality natural gas. If EPA approves a method for monitoring fuel-bound nitrogen in gaseous fuels in the future, M&N may be required to monitor or test nitrogen content in its natural gas supply.

2. Sulfur monitoring shall be conducted using ASTM reference method D5504-94 or another EPA approved methodology on the following schedule:
  - a. Twice monthly for the first six months of operation (after the initial startup), with no two monitoring dates within 10 days of each other;
  - b. If the average sulfur content from the 12 sulfur fuel content test results (distributed over the first six months) is less than 50% of the sulfur limit (as expressed in 40 CFR Part 60, Subpart GG), M&N may reduce monitoring frequency to one measurement per quarter for at least six quarters. If any one of the 12 sulfur fuel content test results mentioned above shows sulfur content greater than 50% of the sulfur limit in 40 CFR Part 60, Subpart GG, then M&N shall notify EPA in writing, provide EPA with the test data, and monitor twice monthly, until otherwise directed;
  - c. If the conditions of b (above) are met, and the SO<sub>2</sub> emissions (calculated using the sulfur fuel content of the past 6 quarters) represent compliance with the SO<sub>2</sub> emission limits in 40 CFR §60.333, then M&N may reduce sulfur fuel content monitoring frequency to twice per year during the first and third calendar quarters;
  - d. Should any measurement taken under a, b, and c (above) indicate non-compliance with 40 CFR Part 60, Subpart GG, M&N, upon learning of said non-compliance, shall immediately begin monitoring fuel content weekly. M&N shall, within 14 days of learning of said non-compliance, notify the Maine Department of Environmental Protection, New Hampshire Department of Environmental Services, Massachusetts Department of Environmental Protection, and the US EPA, such that the custom fuel monitoring schedule can be reexamined.
  - e. Within 14 days of learning of any change in fuel supply, other than Sable Island Area, PNGTS, Tennessee Gas, and Algonquin, or significant change in fuel quality, M&N shall notify EPA of the fuel supply change, such that the custom fuel monitoring schedule can be reexamined. From the time of said notification, until a determination regarding the custom fuel monitoring schedule is made by EPA, fuel shall be monitored weekly.

Additionally, EPA's approval provided that "if additional compressor stations are added in the future, they [will] automatically be subject to the provisions of this letter." Thus additional sampling at this proposed station is not required.

M&N is proposing as BACT for SO<sub>2</sub> the firing of only natural gas. The proposed SO<sub>2</sub> BACT limit is 0.47 lb/hr. The Department accepts this BACT proposal.

#### **D. Low Compressor Speeds**

Through discussions with the turbine manufacturer, Solar, M&N has discovered that operation of SoLoNOx is adversely affected at gas producer speeds below

90%. During normal operating conditions, the majority of the fuel (90-100%) is lean-premixed fuel and the balance is pilot fuel. When the gas producer speed drops below 90%, the balance between premixed and pilot fuel changes with the percentage of pilot fuel increasing. This has the effect of increasing NO<sub>x</sub> and CO concentrations.

To correct this problem, M&N has proposed requiring a programming interlock in its control software to ensure that the units do not fire at gas producer speeds below 90%.

**E. Operation at Low Temperatures**

As discussed above, under normal operating conditions the majority of the fuel is lean-premixed fuel and the balance is pilot fuel. However, M&N has learned that the turbine control systems are programmed to increase pilot fuel when the ambient temperature drops below zero to maintain combustion stability. As a result, emissions increase at these temperatures. M&N has proposed including provisions in the license for increased emissions during periods when the ambient temperature falls below zero degrees Fahrenheit.

**F. Turbine Case Venting and Station Piping Venting**

When a turbine sits idle for some time, it is decompressed and vented to atmosphere to prevent damage to equipment. The turbine is also decompressed and vented when maintenance work is done on the turbine. The venting of turbines has the potential to emit 2.2 ton/year of VOCs. M&N shall keep records as specified for the turbine venting.

M&N performs emergency shutdown (ESD) testing and routine maintenance of station piping which results in venting natural gas to the atmosphere and may also perform actual ESDs. These activities are necessary for safety reasons and no specific emission limit is imposed to restrict these activities. M&N shall notify the Department as specified of any release that results in more than 75,000 scf of natural gas. For fee purposes, it is estimated that emissions from ESD testing and maintenance of station piping venting are approximately 1.7 tons per year of VOCs.

**G. Boiler #1**

Boiler #1 has a heat input of 1.7 MMBtu/hr and is therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BACT analysis for Boiler #1 (1.7 MMBtu/hr) is the following:

1. Boiler #1 shall fire only natural gas.
2. The PM and PM<sub>10</sub> limits are derived from Chapter 103.
3. NO<sub>x</sub>, CO, and VOC emission limits are based upon AP-42 data dated 2/98.
4. Visible emissions from the boilers shall not exceed 10% opacity on a 6 minute block average.

H. Generator #1

M&N proposes to install a 4.29 MMBtu/hr Emergency Generator.

A summary of the BACT analysis for Generator #1 is the following:

1. Generator #1 shall fire only natural gas.
2. Generator #1 shall be limited to 500 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
3. Chapter 103 regulates particulate matter emissions from combustion sources, however in this case a BACT analysis for PM determined a more stringent limit of 0.01 lb/MMBtu (based on AP-42 data dated 7/00) was appropriate and shall be used. The PM<sub>10</sub> limits are derived from the PM limits.
4. NO<sub>x</sub>, SO<sub>2</sub>, CO, and VOC emission limits are based upon AP-42 data dated 7/00.
5. Visible emissions from the generators shall not exceed 10% opacity on a 6-minute block average.

I. Annual Emission Restrictions

M&N shall be restricted to the following annual emissions, based on a 12 month rolling total:

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Turbine #1	4.0	4.0	2.1	32.7	33.2	2.2
Turbine #2	4.0	4.0	2.1	32.7	33.2	2.2
Boiler #1	0.4	0.4	--	0.7	0.6	0.1
Generator #1	0.1	0.1	--	4.4	0.6	0.1
Ventings	--	--	--	--	--	3.9
Cold Weather	0.2	0.2	0.1	3.8	5.2	1.5
<b>Total TPY</b>	<b>8.7</b>	<b>8.7</b>	<b>4.3</b>	<b>74.3</b>	<b>72.8</b>	<b>10.0</b>



### **III.AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

### **ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-857-71-A-N subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive

- dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. § 353.
  - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
  - (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
  - (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
  - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.
  - (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
  - (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
    - (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
      - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
      - b. pursuant to any other requirement of this license to perform stack testing.

- (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
  - (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods,

at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

(16) Turbines #1 and #2

A. Turbines #1 and #2 shall each not exceed the following emissions at ambient temperatures greater than 0 °F:

Pollutant	Load	ppmvd	lb/MMBtu	lb/hr	Control Technology
PM	All	--	0.01	0.91	Natural Gas Only
PM <sub>10</sub>	All	--	--	0.91	Natural Gas Only
SO <sub>2</sub>	All	--	--	0.47	Natural Gas Only
NO <sub>x</sub>	All	15 at 15% O <sub>2</sub>	--	7.47	SoLoNO <sub>x</sub> II Technology
CO	All	--	--	7.58	SoLoNO <sub>x</sub> II Combustion Technology and Good Combustion Control
VOC	All	--	--	0.50	Good Combustion Control via SoLoNO <sub>x</sub> II Combustor

B. Turbines #1 and #2 shall each not exceed the following emissions at ambient temperatures greater than -20 °F and less than or equal to 0 °F:

Pollutant	Load	ppmvd	lb/MMBtu	lb/hr	Control Technology
PM	All	--	0.02	0.94	Natural Gas Only
PM <sub>10</sub>	All	--	--	0.94	Natural Gas Only
SO <sub>2</sub>	All	--	--	0.48	Natural Gas Only
NO <sub>x</sub>	All	42 at 15% O <sub>2</sub>	--	24.5	SoLoNO <sub>x</sub> II Technology
CO	All	--	--	35.6	SoLoNO <sub>x</sub> II Combustion Technology and Good Combustion Control
VOC	All	--	--	1.02	Good Combustion Control via SoLoNO <sub>x</sub> II Combustor

- C. Turbines #1 and #2 shall each not exceed the following emissions at ambient temperatures less than or equal to -20 °F:

Pollutant	Load	ppmvd	lb/MMBtu	lb/hr	Control Technology
PM	All	--	0.02	0.94	Natural Gas Only
PM <sub>10</sub>	All	--	--	0.94	Natural Gas Only
SO <sub>2</sub>	All	--	--	0.48	Natural Gas Only
NO <sub>x</sub>	All	120 at 15% O <sub>2</sub>	--	72.1	SoLoNO <sub>x</sub> II Technology
CO	All	--	--	54.9	SoLoNO <sub>x</sub> II Combustion Technology and Good Combustion Control
VOC	All	--	--	1.57	Good Combustion Control via SoLoNO <sub>x</sub> II Combustor

- D. M&N shall keep records of the number of days during the calendar year that the ambient temperature is below zero and/or -20 degrees Fahrenheit. For any gaps in M&N's temperature data, it may utilize meteorological data from an appropriate representative location.
- E. Visible emissions from Turbines #1 and #2 shall each not exceed 20% opacity, measured as 6 minute averages, except for one 6 minute average period per hour of not more than 27% opacity, except during start-up and shut-down.
- F. Turbines #1 and #2 shall only fire pipeline quality natural gas.
- G. Compliance with the opacity limit shall be demonstrated during the initial performance test in accordance with 40 CFR 60, Method 9.
- H. Compliance with the PM and PM<sub>10</sub> lb/hr emission limits shall be determined through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 5 upon request by the Department.
- I. Compliance with the CO and NO<sub>x</sub> licensed emission limits shall be determined through stack testing in accordance with 40 CFR Part 60 Appendix A, Methods 10 and 7E, respectively during the initial performance test and upon request by the Department.
- J. Compliance with the SO<sub>2</sub> lb/hr emission limit shall be demonstrated by the maximum natural gas firing rate into each turbine and the available sulfur content data that is collected in accordance with the schedule and methods approved by EPA and described in Condition (18) below.
- K. M&N shall demonstrate compliance with the VOC lb/hr limit by either running a Method 25A test for TOC or by running a Method 25A test and Method 18 tests for methane and ethane and subtracting the Method 18 tests from the Method 25A test.
- L. M&N shall keep documentation of all maintenance and repairs to Turbines #1 and #2. The documentation shall include all planned shutdowns, maintenance

procedures and major parts replacements. This shall be available to the Department upon request.

- M. Except during periods of start-up and shut-down, M&N shall not operate Turbine #1 or Turbine #2 at gas producer speeds less than 90%. Compliance shall be demonstrated by record keeping of gas producer speeds at all operating times.
- (17) Each gas turbine, #1 and #2, is subject to and shall comply with the requirements of the Federal NSPS 40 CFR Part 60, Subpart A (General Provisions), and Subpart GG (Stationary Gas Turbines).
- (18) EPA has given approval to a monitoring scheme where natural gas monitoring will be conducted at the Baileyville station only in cases of southbound gas flow and at the Westbrook station in cases of northbound gas flow provided there are no additional entry points for natural gas or other sulfur containing streams between these stations.

M&N shall conduct fuel monitoring at the Baileyville or Westbrook station as appropriate, or at additional entry point as appropriate, using ASTM reference method D5504-94, or another EPA approved methodology, according to the schedule listed in the licenses for the Baileyville and Richmond compressor station licenses. Failure to monitor for sulfur at these stations as described constitutes a violation of this license.

- (19) M&N shall monitor and record the following as specified, for the facility:

<b>Parameter</b>	<b>Monitor</b>	<b>Record Monitor Data</b>	<b>Compile Fuel Usage</b>
Natural Gas Flow Rate (actual cubic feet input)	Continuously	Continuously	Monthly

- (20) If any parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the continuous emission monitoring system was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction so the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

- (21) M&N shall not exceed 2.2 ton/yr of VOC on a 12 month rolling total basis from turbine case venting. M&N shall maintain a log of all turbine case venting and ESD events that includes the following information:
- A. date of the event
  - B. estimated or actual event start time
  - C. estimated or actual event duration
  - D. event source (Unit 1, Unit 2, or ESD)
  - E. event type (shutdown, maintenance, testing, or malfunction)
  - F. description of event
  - G. estimate of the amount of natural gas vented
  - H. estimate of the amount of VOC emitted
  - I. 12 month rolling total VOC emissions
- (22) M&N shall notify the Department in advance of any scheduled venting event that is expected to result in the release of more than 75,000 scf of natural gas. M&N shall notify the Department within two working days of any unscheduled venting event that results in the release of more than 75,000 scf of natural gas.
- (23) Performance Tests
- A. M&N shall conduct the following initial performance tests within 60 days after achieving the maximum production rate at which the plant will be operated but not later than 180 days after the initial startup. All testing shall comply with all of the requirements of the DEP Compliance Test Protocol and with 40 CFR Part 60, as appropriate, or other methods approved by the Bureau of Air Quality. A representative of the DEP or EPA shall be given the opportunity to observe the compliance testing.
  - B. M&N shall install test ports in stacks #1 and #2, in accordance with the criteria of 40 CFR Part 60, Appendix A, Method 1, and test platforms, if necessary, to allow emission compliance testing for the each gas turbine.
  - C. M&N shall conduct initial performance testing on each gas turbine for NO<sub>x</sub> (lb/hr, ppm), CO, VOCs and, upon request by the Department, total PM. Test results shall be reported in the applicable units of the standard.
- (24) Record Keeping Requirements
- M&N shall maintain records of the most current six year period of all monitored fuel flow rates required as a condition of this license. These records shall consist of the following:
- 1. documentation which shows fuel flow rates during all source operating time, including calibration and audits; and

2. a complete data set of all fuel flow rates, as specified in this license. All records shall be made available to the Department upon request.
- (25) Stack Testing
- A. M&N shall conduct emission testing, and demonstrate compliance with the applicable standard within 60 days after receipt of notice from the Bureau of Air Quality.
- B. All testing programs shall comply with all of the requirements of the DEP Compliance Test Protocol and with 40 CFR Part 60, as appropriate, or other methods approved by the Bureau of Air Quality.
- (26) M&N shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next working day, whichever is later, of such occasions and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation.
- (27) Boiler #1
- A. Boiler #1 shall fire only natural gas.
- B. Emissions shall not exceed the following:

<b>Equipment</b>		<b>PM</b>	<b>PM<sub>10</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #1	lb/hr	0.08	0.08	0.16	0.13	0.01

- C. Visible emissions from Boiler #1 shall not exceed 10% opacity on a 6 minute block average.
- (28) Generator #1
- A. M&N shall limit the Generator #1 to 500 hr/yr of operation (based on a 12 month rolling total). An hour meter shall be maintained and operated on the Emergency Generator.
- B. The Emergency Generator shall be equipped with an elapsed time meter. The value from the meter will be entered into a spreadsheet on a monthly basis. The spreadsheet will track operating hours on a monthly and a 12 month rolling total basis
- C. The Emergency Generator shall fire only natural gas.



D. Emissions shall not exceed the following:

Equipment		PM	PM <sub>10</sub>	NO <sub>x</sub>	CO	VOC
Generator #1	lb/MMBtu	0.01	-	-	-	-
	lb/hr	0.04	0.04	17.50	2.39	0.51

E. Visible emissions from the Emergency Generator shall not exceed 10% opacity on a 6-minute block average.

(29) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;  
or
- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

Phone: (207) 287-2437

The emission statement must be submitted by September 1.

- (30) M&N shall pay the annual air emission license fee within 30 days of May 1<sup>st</sup> of each year. Pursuant to 38 M.R.S.A. Section 353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 M.R.S.A. Section 341-D, Subsection 3.

**Maritimes & Northeast Pipeline, L.L.C.**  
**Waldo County**  
**Searsmont, Maine**  
**A-857-71-A-N**

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**Departmental**  
**Findings of Fact and Order**  
**Air Emission License**

(31) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/13/03

Date of application acceptance: 3/5/03

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Lynn Ross, Bureau of Air Quality.